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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,818	10/01/2001	Toshiki Taguchi	Q66451	3989

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SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,818

Applicant(s)

TAGUCHI, TOSHIKI

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9,10,12-16,21,22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 1-8,17-20 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-10, 12-16, 21-22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 6) ☐ Other:

DETAILED ACTION

1. Applicant's amendment, declaration and accompanying remarks filed August 25, 2003 have been acknowledged.
2. Examiner acknowledges cancelled claims 1-8, 11, 17-20 and 23.
3. Examiner acknowledges amended claims 9, 13, 21 and 24.
4. The objection to the Information Disclosure Statement is withdrawn due to applicant's submission of the form PTO-1449.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 9-10, 12-14, 21-22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al., U.S. Patent Number 5,281,489.

Mori discloses an electroluminescent element that may find application in various types of display devices. Mori also discloses that the electroluminescent element comprises an anode and a cathode and disposed there between an organic layer wherein the organic layer comprises various compounds that read on applicant's instant claims 9-10, 12-14, 21-22 and 24 (see abstract, column 5, lines 1-67 and column 29, lines 61-67). Mori discloses polyvinyl carbazole compounds that may be or may not be substituted. For example, see compounds (5 and 6) in column 5. When B¹ is an ethyl group and A² is formula 1, the compounds of the Mori reference read on instant claims 9-10 and 21-22. The compounds in the Mori reference inherently have a

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molecular weight within the range of 1,000 to 10,000,000. Additionally, the reference discloses that the amount of the organic compound in the luminescent layer is preferably 0.01 to 20 parts by weight as per instant claim 13 (see column 26, lines 63-68). The Mori reference also discloses that the luminescent layer is formed from a solution by coating method as per instant claims 14 (see column 27, lines 15-20).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al., U.S. 5,281,489 in view of Baldo et al., Journal of Applied Physics Letters, Volume 75, Number 1.

Mori discloses an electroluminescent element that may find application in various types of display devices. Mori also discloses that the electroluminescent element comprises an anode and a cathode and disposed there between an organic layer wherein the organic layer comprises various compounds that read on applicant's instant claim 9 (see abstract, column 5, lines 1-67 and column 29, lines 61-67). For example, see compounds (5 and 6) in column 5. When B¹ is an ethyl group and A² is formula 1, the compounds of the Mori reference read on instant claims 9-10 and 21-22. The compounds in the Mori reference inherently have a molecular weight within the range of 1,000 to 10,000,000.

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Mori does not disclose that the organic layer comprises a light emitting material that uses a triplet exciton for light emission wherein the light-emitting material is an iridium complex. Baldo teaches an organic light-emitting device that uses a triplet exciton for light emission. In addition, Baldo employs tris(2-phenylpyridine) iridium as the light-emitting material as per instant claims 7-8 and 15-16 (see entire document). Triplet emission affects the power efficiency of the organic light-emitting device. Therefore, it would have been obvious for one of ordinary skill in the art to use a triplet exciton wherein the light-emitting material is an iridium complex so as to achieve peak quantum and power efficiencies of approximately 10% (see page 1, paragraphs 1 and 2).

Response to Arguments

9. Applicant's arguments filed August 25, 2003 have been fully considered but they are not persuasive. Applicant argues that the Mori reference does not read on amended claims 9, 13, 21 and 24. Mori discloses that the polyvinyl carbazole compounds may or may not be substituted. Instant claim 9 provides for unspecified substituents for R₅ and R₆. None of the (H) examples listed in the specification have a specified substituent for R₅ and R₆ other than hydrogen. Example H-14 of applicant's specification has a substituent on one (1) not on both R₅ and R₆. Applicant argues that the carbon atom to which R₁ is attached in the polymer chain is bonded to the carbazole ring at position 3 or 6. The Mori reference discloses that formula 6 in the reference is bonded to A² where it can be bonded at the 3 or 6 position of the carbazole ring. Applicant argues that the instant compounds have unexpectedly superior results. Applicant has not provided specific substituents for R₅ and R₆ and therefore the compounds recited in the Mori

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reference read on the instant compounds and would be expected to yield the same superior results. The rejections are maintained.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone number for the Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

